

Encounters with Chemistry

# Upton Sinclair

William B. Jensen

Department of Chemistry, University of Cincinnati  
Cincinnati, OH 53706

*Many famous nonchemists have left behind accounts of their first encounter with chemistry. Whether the person in question was a psychologist, a writer, a critic, an artist, an economist, a mathematician, or a philosopher, whether the experience was brief or prolonged, whether it was pleasant or unpleasant, the purpose of this series is to record these encounters and do so in the person's own words whenever possible.*

Upton Sinclair (figure 1) was the example *par excellence* of what Teddy Roosevelt famously called a “muckraker.” A committed socialist, he felt compelled to expose the evils of big money and political corruption wherever and whenever he detected traces of their pernicious influence – be it the American educational system, organized religion, or the profession of journalism itself.

In the course of his 90-year life he would write more than 100 books. Some of these were straightforward factual reporting, whereas in many other cases the intended exposé was fictionalized as novel. Few of these are still read today, with the exception of *The Jungle* – his 1906 novelized exposé of the Chicago meat-packing industry. Sinclair had hoped to raise public outrage over the industry’s harsh working conditions and exploitation of immigrant workers, but instead caused a public outcry over his descriptions of its unsanitary practices. As he later said, “I aimed at the public’s heart, and by accident hit it in the stomach.” Yet other books dealt with his advocacy of various health fads and with mental telepathy, in which he and his wife were firm believers.

Sinclair’s description of his first, and not very happy, encounter with chemistry is found in his 1962 autobiography and occurred in 1892, at age 14, when he first entered City College of New York. Despite its name, at that time this school included not only university level courses but also those corresponding to high school and junior high school:<sup>1</sup>

*The college was situated in an old brick building on the corner of Lexington Avenue and 23rd Street. It was a firetrap, but I did not know it, and fortunately never had to learn it. There were about a thousand students in its four or five stories, and we trooped from one*

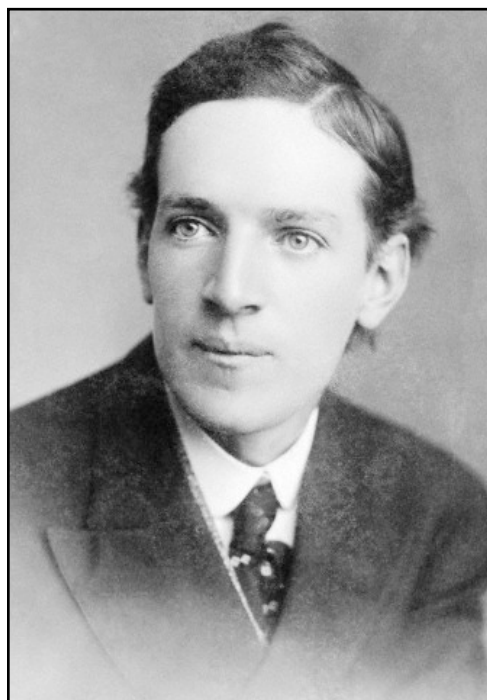


Figure 1. Upton Sinclair  
(1878-1968)

*classroom to another and learned by rote what our bored instructors laid out for us ...*

*The professor of chemistry was R. Ogden Doremus, a name well known to the public because he testified as an expert in murder trials. He had snowy white mustaches, one arm, and a peppery temper. His assistant was his son, whom he persisted in referring to as Charlie, which amused us, because Charlie was a big man with a flourishing black beard. I managed early in the course to get on the elderly scientist’s nerves by my tendency to take the physical phenomena of the universe without due reverence. The old gentleman would explain to us that scientific caution required us to accept nothing on his authority, but to insist on proving everything for ourselves. Soon afterwards he produced a little vial of white powder, remarking, “Now, gentlemen, this vial contains arsenic, and a little pinch of it would be sufficient to kill all the members of this class.” Said I, “You try that, Professor!”*

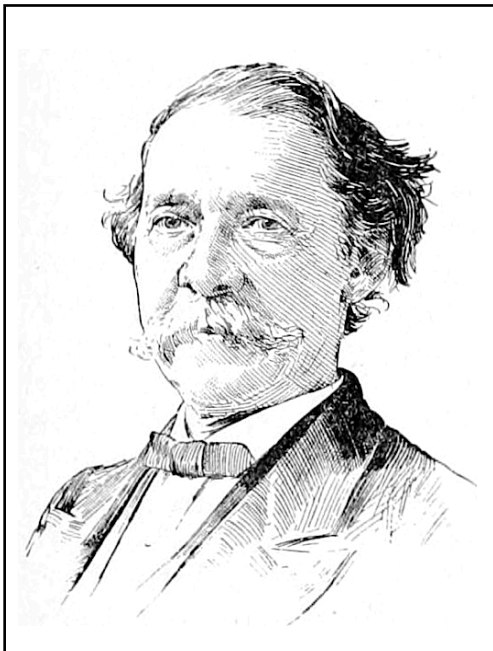


Figure 2. Robert Ogden Doremus  
(1824-1906)

*Really he might of joined in the laugh. But what he did was to call me an "insolent young puppy," and to predict that I was going to "flunk" his course, in which event he would see to it that I did not get promoted to the next class. This roused my sporting spirit and I decided to "flunk" his course and get such high marks in all the other courses that I could not be held back. This I did.*

Given his later career bucking the establishment whenever possible, Sinclair's negative response to Doremus's authority is certainly consistent. His description of his teacher's reputation and quirks is also fairly accurate. Born to a wealthy and socially influential New York family, Robert Ogden Doremus (figure 2) was educated at Columbia University and New York University, where he served as an assistant to the well-known British-American chemist and historian, John Draper, during the latter's famous work on the laws of photochemistry. In 1847 he spent a year studying industrial electrochemistry in Paris and, after his return to New York City in 1848, he established a consulting laboratory on Broadway in partnership with Charles T. Harris.

In 1850 he completed an MD degree at New York University and, over the next decade or so, became associated with various local medical colleges, hospitals, and societies, culminating in his appointment in 1861 as Professor of Chemistry and Toxicology at Bel-

levue Hospital Medical College (figure 3). It was his increasing specialization in this field that resulted in his appearance, as mentioned by Sinclair, as a high-profile expert witness in several prominent murder trials. On top of all these duties, in 1860 Doremus was appointed as Professor of Chemistry and Physics at the City College of New York, where he remained until his retirement in 1902.

Even Sinclair's remarks concerning Doremus's exaggerated reverence for the laws of nature appear to be accurate, at least if we are to judge from a very bad poem written by one Luther R. Marsh in honor of Doremus's 70th birthday:<sup>2</sup>

*In Chemics, the Doctor stands first on the list;  
The nature he knows of all things that exist.  
He lets loose the spirits of earth, rock or water,  
And drives them through solids, cemented with mortar.  
How deftly he handles the retort and decanter!  
Makes lightning & thunder would scare Tom O'Shanter;  
Makes feathers as heavy as lead in a jar,  
And eliminates spirits from coal and from tar.*

*With a touch of his finger he'll turn lead or tin  
To invisible gas and then back again;  
He will set them aflame, as in the last day,  
When all things are lit by the Sun's hottest ray.*

*With oxygen, hydrogen, nitrogen – all –  
No gas can resist his imperative call –  
He'll solidify, liquefy, or turn into ice;  
Or all of them reconvert back in a trice.*

*Amid oxides and alkalies, bromides and salts,  
He makes them all dance in a chemical waltz;  
And however much he with acids may play,  
There's never a drop stains his pure mortal clay.*

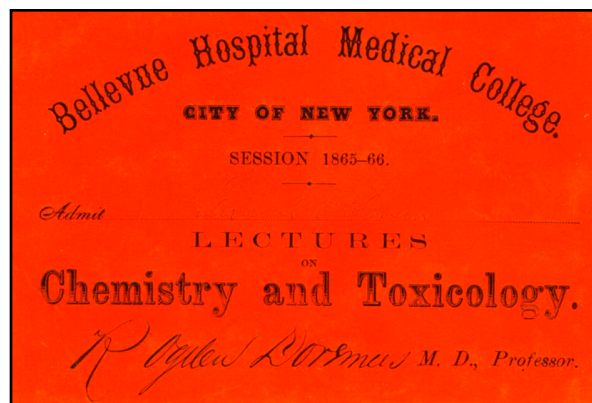


Figure 3. A surviving ticket for Doremus's lectures on chemistry and toxicology at Bellevue Hospital Medical College for the 1865-66 term.

## ENCOUNTERS WITH CHEMISTRY: UPTON SINCLAIR

*He well knows what things will affect one another;  
What acts as an enemy and what is a brother;  
He feels quite at home with all chemic affinities,  
And treats them respectfully as mystic Divinities.*

I will spare the reader the other eight verses.

“Charlie,” by the way, was Doremus’s eldest son, Dr. Charles Avery Doremus, who taught chemistry at City College for 22 years. Unhappily none of the biographical accounts of Doremus I consulted made men-

tion of how he came to lose one of his arms and so we must take Sinclair’s word for this particular, albeit highly visible, physical quirk.

### References and Notes

1. U. Sinclair, *Autobiography*, Harcourt, Brace & World: New York, NY, 1962, pp. 23-24.
2. K. Sanborn, *Memories and Anecdotes*, Putnam’s Sons: New York, NY, 1915, pp. 102-103.